

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

BRANDI DIDIER, AS NEXT FRIEND TO §
H.G.H., A MINOR CHILD, §
§
Plaintiff, §
§ Civil Action No. 4:18-cv-98
v. §
§ JURY DEMAND
FCA US LLC, §
§
Defendant. §

**DEFENDANT FCA US LLC'S RESPONSE TO PLAINTIFF'S MOTION TO EXCLUDE
THE TESTIMONY OF DEFENDANT'S EXPERT, WILLIAM VAN ARSDELL**

Defendant FCA US LLC (“FCA US”) files this Response to Plaintiff’s Motion to Exclude the Testimony of Defendant’s Expert, William Van Arsdell and respectfully submits the following:

INTRODUCTION

Plaintiff’s motion to exclude the testimony of Dr. William Van Arsdell (“Dr. Van Arsdell”) should be denied. Plaintiff does not challenge his qualifications.¹ Plaintiff incorrectly claims that in this case Dr. Van Arsdell “simply guesses” about the evidence H.G.H. was misusing the seatbelt. Instead, Dr. Van Arsdell’s opinions are based upon the physical evidence on the seat belt and right front seat, his surrogate study and analysis, and, the injury analysis of Dr. Courtney.² In formulating his opinions, Dr. Van Arsdell followed generally accepted, reliable, scientific methodologies. Recent testing disclosed by Plaintiff only confirms his analysis. Dr. Van Arsdell’s expert testimony will be helpful the jury, and he should be allowed to testify.

¹ See Doc. 50 at 3-5.

² See Declaration of William Van Arsdell, attached as Exhibit 1, at 16.

ARGUMENT AND AUTHORITIES

A. Standards for expert opinion admissibility are well-known.

Pursuant to Federal Rule of Evidence 702 and in accordance with *Daubert* and its progeny, qualified witnesses may offer opinion testimony if the expert's scientific, technical, or other specialized knowledge will be helpful to the trier of fact, the testimony is based on sufficient facts or data, the testimony is the product of reliable principles and methods, and the expert has reliably applied the principles and methods to the facts of the case. *See Fed. R. Evid. 702; see generally Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

As this Court noted in *Hendricks v. Ford Motor Co.*, *Daubert*'s framework is flexible; it serves as a starting point for the inquiry of admissibility. 2012 WL 12045429, at *2 (E.D. Tex.); *see also Pipitone v. Biomatrix, Inc.*, 288 F.3d 239, 247 (5th Cir. 2002). District Courts are provided wide latitude in determining the admissibility of experts. *Williams v. Manitowac Cranes, L.L.C.*, 898 F.3d 607, 615 (5th Cir. 2018).

Dr. Van Arsdell's knowledge and experience in the field of mechanical engineering, specifically occupant protection, will be helpful to the trier of fact, and he has formed his opinions based on sufficient data, applying reliable principles and methods to the facts of this case.

B. Dr. Van Arsdell is qualified to offer expert testimony based on his education, training, and experience.

Plaintiff does not challenge or even address Dr. Van Arsdell's impeccable qualifications as a mechanical engineer and decades of experience in the field – but it is important to understand Dr. Van Arsdell's substantial qualifications before delving into his analysis for this case. Dr. Van Arsdell's curriculum vitae was submitted with his expert report and establishes that he is qualified to offer expert testimony. Dr. Van Arsdell is a registered professional engineer with expertise in the area of occupant protection in motor vehicles, including the design, safety and performance of

seat belts and restraint systems.³ He is also a certified NHTSA Child Passenger Safety Technician.⁴ Dr. Van Arsdell obtained his bachelor's degree in mechanical engineering (summa cum laude) from the University of Arizona.⁵ He then obtained his master's degree from the University of Illinois at Urbana-Champaign and a Ph.D. from the Massachusetts Institute of Technology (MIT).⁶ His graduate work included teaching mechanics and materials at the University of Illinois at Urbana-Champaign, where he was also awarded the Outstanding Teacher Award.⁷

After completing his Ph.D. at MIT, Dr. Van Arsdell worked for Exponent for over ten years and at General Motors for over two years.⁸ Dr. Van Arsdell has run hundreds of different tests that simulated real-world collisions, including dynamic sled testing and full-scale vehicle crash tests.⁹ Dr. Van Arsdell has extensive experience, over 20 years, evaluating the design, safety and performance of seat belts and restraint systems.¹⁰ He has evaluated and tested over one thousand seat belts and studied thousands of crash tests, sled tests and seat belt tests conducted by other engineers.¹¹ Dr. Van Arsdell has investigated hundreds of motor vehicle collisions, and his research has addressed issues directly applicable to the collision involving H.G.H.¹² Through his extensive experience with seat belts and restraint systems, his knowledge of applicable literature, government standards and industry practices, Dr. Van Arsdell is very familiar with generally accepted methodology used to evaluate the design and safety of seat belts and restraint systems

³ See Declaration of William Van Arsdell, attached as Exhibit 1, at 1.

⁴ *Id.*

⁵ See Dr. Van Arsdell's curriculum vitae, attached as Appendix B to Exhibit 1.

⁶ *Id.*

⁷ See Declaration of William Van Arsdell, attached as Exhibit 1, at 1; see Dr. Van Arsdell's curriculum vitae, attached as Appendix B to Exhibit 1.

⁸ See Declaration of William Van Arsdell, attached as Exhibit 1, at 1.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

and their performance in accidents.¹³ Analysis of dynamic testing, government standards, industry practices, field performance and technical work published in the literature, particularly as of the time a product is placed in the market, is included in generally accepted methodology for evaluating the design, safety and performance of seat belts and restraint systems.¹⁴

C. Dr. Van Arsdell's opinions are reliable because they are derived from his analysis of physical evidence and relevant data as well as his education, experience, and specialized knowledge.

Daubert provides a flexible framework for courts to use in their roles as gatekeepers of expert testimony. *Hendricks v. Ford Motor Co.*, 4:12-CV-71, 2012 WL 12045429, at *1-2 (E.D. Tex. Sept. 6, 2012); *see also Pipitone v. Biomatrix, Inc.*, 288 F.3d 239, 244 (5th Cir. 2002). Depending on the nature of the issue and the expert's particular expertise, certain factors may or may not be pertinent to an evaluation of reliability. *Pipitone*, 288 F.3d 239 at 244. Specialized knowledge may form the basis of expert testimony. *Kumho Tire*, 526 U.S. at 147. Moreover, *this Court* recognized that experience and education, coupled with studies and thorough review of relevant materials, provides a reliable basis for expert testimony. *Hendricks v. Ford Motor Co.*, 2012 WL 12045429 (denying Plaintiff's Motion to Exclude).

Plaintiff contends that several of Dr. Van Arsdell's opinions are not grounded in sufficient facts or data.¹⁵ Specifically, Plaintiff claims that Dr. Van Arsdell's opinions "regarding the position in which H.G.H. was in her seat, the position of her seat belt, and the load marks on H.G.H.'s seat belt" are not based on sufficient facts or data.¹⁶ Plaintiff's contention is incorrect.

Dr. Van Arsdell based his opinions and related statements regarding each of those topics available facts, data, studies, and consultant with Dr. Courtney. Based on the physical evidence,

¹³ *Id.*

¹⁴ *Id.*

¹⁵ Doc. 50 at 3.

¹⁶ *Id.*

such as load marks on H.G.H.’s seat belt, load marks on the other three seat belts that were being used by other occupants in this crash, damage to the right-front seat back, and Dr. Courtney’s analysis of injuries to H.G.H.’s body, Dr. Van Arsdell concluded that “[t]here are relatively light load marks on the second-row-right seat belt.”¹⁷ Plaintiff’s testing from the motion even confirmed this opinion because the marks on H.G.H.’s second-row-right seat belt were relatively light compared to the marks made in any of the three scenarios that Plaintiff tested.¹⁸ The damage to the right-front seat back is consistent with H.G.H being ineffectively restrained by the seat and seat belt due to the excessively reclined seat back, as well as restraint system misuse in other ways.¹⁹ The surrogate study and physical evidence support this opinion.²⁰

Furthermore, Dr. Van Arsdell opined that “with the seat back adjusted to the as-found angle and the occupant looking forward, leaning back with a taut seat belt, the belt would not allow H.G.H. to interact forcefully with the right-front passenger seat back.”²¹ The basis for his opinion was the surrogate study he conducted using an exemplar vehicle of the same design as the subject vehicle and a surrogate of similar size to H.G.H.²² As is common in the field, Dr. Van Arsdell relied on his education, training, experience, and his understanding of the crash dynamics to complete his analysis of the surrogate study.²³ Surrogate studies are commonly used by engineers in Dr. Van Arsdell’s field of expertise.²⁴ Indeed, Plaintiff’s experts conducted their own surrogate studies and used the studies as foundation for their opinions in this matter.²⁵

¹⁷ *Id.* at 12.

¹⁸ *Id.*

¹⁹ See Exhibit 1, at 14.

²⁰ *Id.* at 15.

²¹ See Van Arsdell Report, attached as Appendix A to Exhibit 1, at 4.

²² See Declaration of William Van Arsdell, attached as Exhibit 1, at 13.

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.* at 14.

Likewise, Dr. Van Arsdell's opinions that H.G.H. did not submarine and that she was possibly out of position likely with the lap belt resting on her abdomen are also based on his surrogate study, physical evidence on the seat belts and right front seat, his analysis of load marks and his consultation with Dr. Courtney regarding her analysis of occupant kinematics and injuries.²⁶ Although Dr. Van Arsdell considered Plaintiff and Brandi Didier's testimony regarding H.G.H.'s position and seat belt position, he also considered other evidence, and noted multiple seating positions that although consistent with the testimony, are indicative of a misuse of the restraint system.²⁷ As this Court noted in *McCune v. Graco Children's Products, Inc.*, eyewitness testimony that contradicts the expert's findings will not preclude a party from using an expert that otherwise satisfies the Rules of Evidence and *Daubert*. 2011 WL 13217898, at *3 (denying Plaintiff's Motion to Exclude expert testimony, stating "Defendant is entitled to rebut eyewitness testimony with other evidence and testimony").

D. Dr. Van Arsdell's proffered opinions are more than guesses or mere statements of possibilities because of the clearly described methodology utilized to arrive at his conclusions.

Courts recognize expert's practice of drawing conclusions from a set of observations, based on the expert's specialized, extensive experience. *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 155 (1999) ("no one denies that an expert might draw a conclusion from a set of observations based on extensive and specialized experience."); *Pipitone*, 288 F.3d at 245. The Supreme Court recognized that these conclusions may be based on professional studies. *Kumho Tire*, 526 U.S. at 152. Moreover, this Court recognized that experience and education, coupled with studies and thorough review of relevant materials, provides a reliable basis for expert testimony. *Hendricks v. Ford Motor Co.*, 2012 WL 12045429 (denying Plaintiff's Motion to Exclude).

²⁶ *Id.* at 16.

²⁷ *Id.*

Plaintiff's mischaracterization of Dr. Van Arsdell's testimony as "guessing" and merely stating "possibilities" is incorrect.²⁸ Dr. Van Arsdell's description of the methodology he used to analyze this case is on page 2 of his report. However, Plaintiff also erroneously charges that Dr. Van Arsdell "provides no explanation about his methodology."²⁹ As described in his report and referenced above, Dr. Van Arsdell's methodology involved an analysis of the evidence on the seat belt, the right-front seat, a surrogate study and the analysis conducted during that study, and consultation with Dr. Courtney regarding her analysis of the injuries sustained by H.G.H.³⁰ This generally accepted methodology is routinely employed by other engineers that work in Dr. Van Arsdell's field of expertise. His methodology has often been used in peer reviewed literature to assess similar concepts to those he evaluated in this case.³¹ And contrary to Plaintiff's claim that he included only cursory references, Dr. Van Arsdell included citations to more than 12 peer reviewed papers to support and explain how he arrived at his conclusions.³² Though Plaintiff cites a variety of caselaw in which experts were excluded based on speculative testimony, none provide a legitimate parallel to Dr. Van Arsdell's testimony.³³ For example, Plaintiff cites *Pipitone*, in which a medical expert was excluded because he testified that "it was as likely as not that [the treatment] caused the infection" and that the expert had "no scientific evidence" to support the conclusion that that it was more likely than not the infection was caused that way. 288 F.3d at 244. Plaintiff blatantly ignores Dr. Van Arsdell's unequivocal statements in his expert report, including:

"This **evidence** on the upper portion of the right-front seat back **indicates** that the subject child was not only misusing the seat and seat belt by excessively reclining the seat back, but **must also have been** misusing the restraint system in other ways."³⁴ (emphasis added).

²⁸ Doc. 50 at 3-4.

²⁹ *Id.* at 5.

³⁰ See Declaration of William Van Arsdell, attached as Exhibit 1, at 17.

³¹ *Id.* at 17-18.

³² *Id.* at 18.

³³ Doc. 50 at 4.

³⁴ See Van Arsdell Report, attached as Appendix A to Exhibit 1, at 8.

It is only in addition to those clear conclusions that Dr. Van Arsdell states a “taut seat belt would likely have prevented the observed damage” and that “H.G.H. may have turned onto her side. However, the pertinent portion of the seatbelt is its misuse; an opinion of Dr. Van Arsdell that was unambiguous. Plaintiff also cites *Williams v. Ford Motor Co.*, in which a Plaintiff’s expert was excluded for not having an opinion to a reasonable degree of scientific certainty. No. 1:12-CV-108, 2013 WL 3874751, at *7 (E.D. Missouri, July 25, 2013). The pertinent exchange of the expert’s deposition on which the *Williams* court focused is:

Q. So as we sit here today, do you know what caused this accident?

A. In my opinion, the cause of the accident was the gear shift indication on the dashboard showing park when the vehicle was actually—transmission was actually in drive, and that occurred because the shift cable was not properly retained to its bracket.

Q. As far as—as far as a shift cable not being properly attached to the bracket, are you saying that that's because of the fitting?

A. I believe it's because of the shift actuator cable fitting, the plastic part.

Q. Okay. And tell me again what—what evidence you have to base your opinion upon that the shift actuator cable fitting failed?

A. I don't know for certain that it failed.

Q. Okay.

A. I believe it's possible that it could based on the design.

Q. And is it also possible that it could not have failed?

A. That's possible.

2013 WL 3874751, at *6. Plaintiff further cites *Wofford v. Bonilla*, in which the expert explicitly conceded he could not opine to a reasonable degree of scientific certainty on the matter—a third situation which this Court does not face.³⁵ Dr. Van Arsdell’s Report clearly states his methodology

³⁵ The remaining cases Plaintiff cites at this portion of her Motion are criminal cases; *Brooks v. U.S.*, 2011 WL 3882288 at *6 (E.D. Tenn. Sept. 2, 2011) (*quoting Lindsey v. Miami Dev. Corp.*, 689 S.W.2d 856, 861-62 (Tenn. 1985)) (noting that possibilities cannot establish causation when contemplating a Motion for Summary Judgment); *Burleson v. Texas Dept. of Crim. J.*, 393 F.3d 577, 585-86 (5th Cir. 2004) (stating that the expert offered no evidence and could not cite any studies on the issue)

utilized in his evaluation and all the evidence, both direct and circumstantial, upon which he relied. Further, he discusses other technical and scientific data that aided him in reaching his conclusions. It is nonsensical to claim that, like cases cited by Plaintiff, Dr. Van Arsdell did not rely on evidence or is merely speculating on the matter.

E. Plaintiff's new testing supports Dr. Van Arsdell's opinions.

Plaintiff disclosed three sled tests with her motion.³⁶ The sled tests results were consistent with results of testing that Dr. Van Arsdell and other engineers have conducted in the past.³⁷ Plaintiff's three tests all confirmed that the load marks on H.G.H.'s second-row-right seat belt would have been more severe (noticeable) and the damage to the right-front seat back would have been less severe unless her seat belt was being profoundly misused in a way that was even more pronounced than the misuse evaluated in their testing.³⁸ For example, consistent with Dr. Van Arsdell's opinion that H.G.H. was not only misusing the seat and seat belt by excessively reclining the seat back but must also have been misusing the restraint system in other ways, Plaintiff's tests show that even with an excessively reclined seat back, an out of position seat belt and an out of position occupant, the load marks would have been more pronounced than those observed on H.G.H.'s seat belt.³⁹ See images below from Dr. Van Arsdell's declaration.

³⁶ Doc. 50 at 6-8.

³⁷ See Declaration of William Van Arsdell, attached as Exhibit 1, at 20.

³⁸ *Id.*

³⁹ *Id.* 21-27.

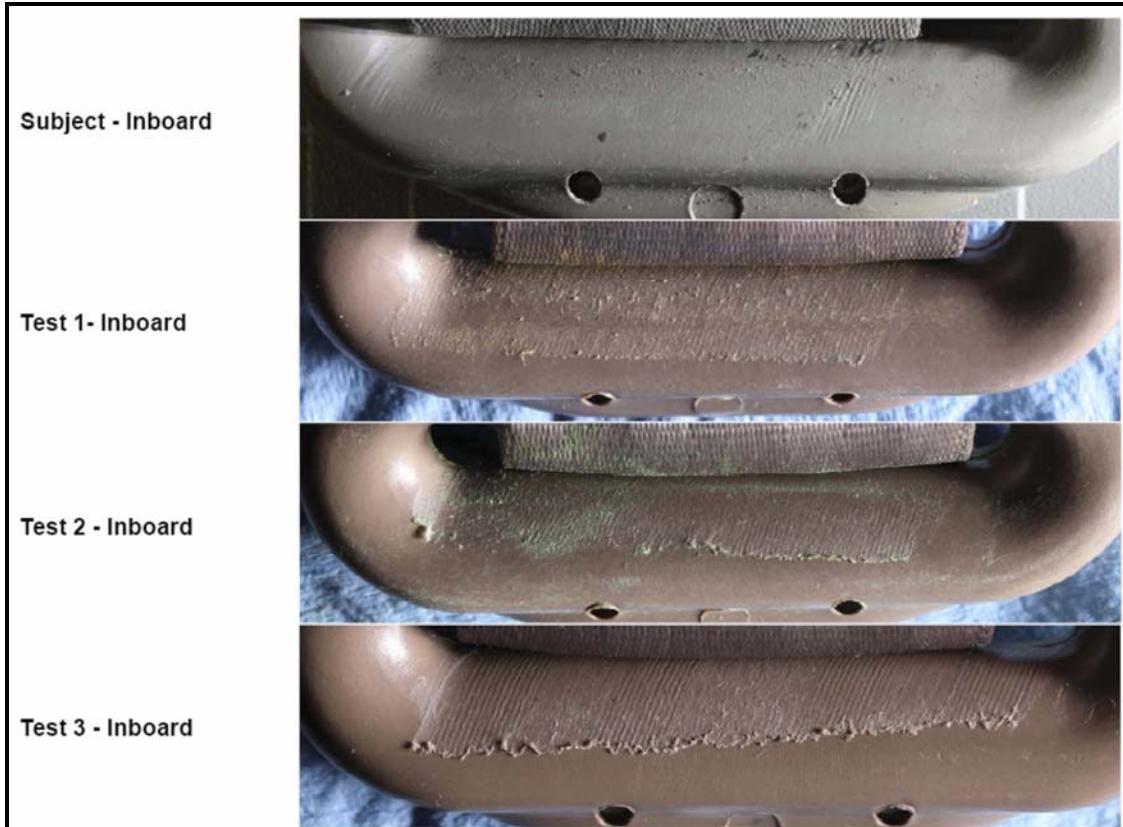


Figure 7 – Marks on H.G.H.’s D-ring and Plaintiff’s test D-rings, inboard side⁴⁰

⁴⁰ *Id.* at 27.

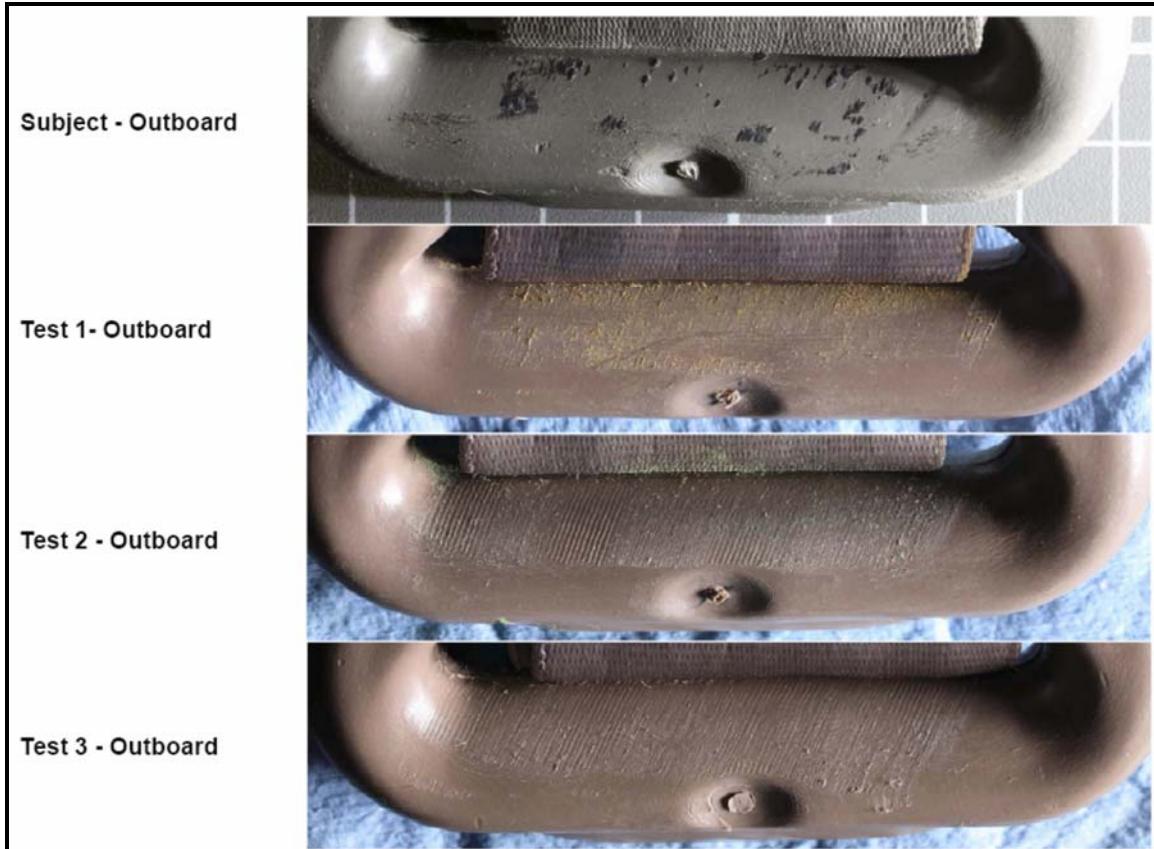


Figure 8 – Marks on H.G.H.’s D-ring and Plaintiff’s test D-rings, outboard side ⁴¹

Likewise, a comparison of latch plates markings also supports the same conclusion. See the composite photographs below from Dr. Van Arsdell’s declaration, which compare the marks on the inboard and outboard sides of the latch plates from H.G.H.’s seat belt and the seat belts from all three of Plaintiff’s tests. The marks on H.G.H.’s latch plate are less severe than those in all three of Plaintiff’s tests.⁴² Plaintiff’s tests do not provide the Court with an explanation of how H.G.H. misrouted the belt, but rather demonstrate the misuse must have been greater than any of the three conditions of that set of tests.

⁴¹ *Id.* at 29.

⁴² *Id.*

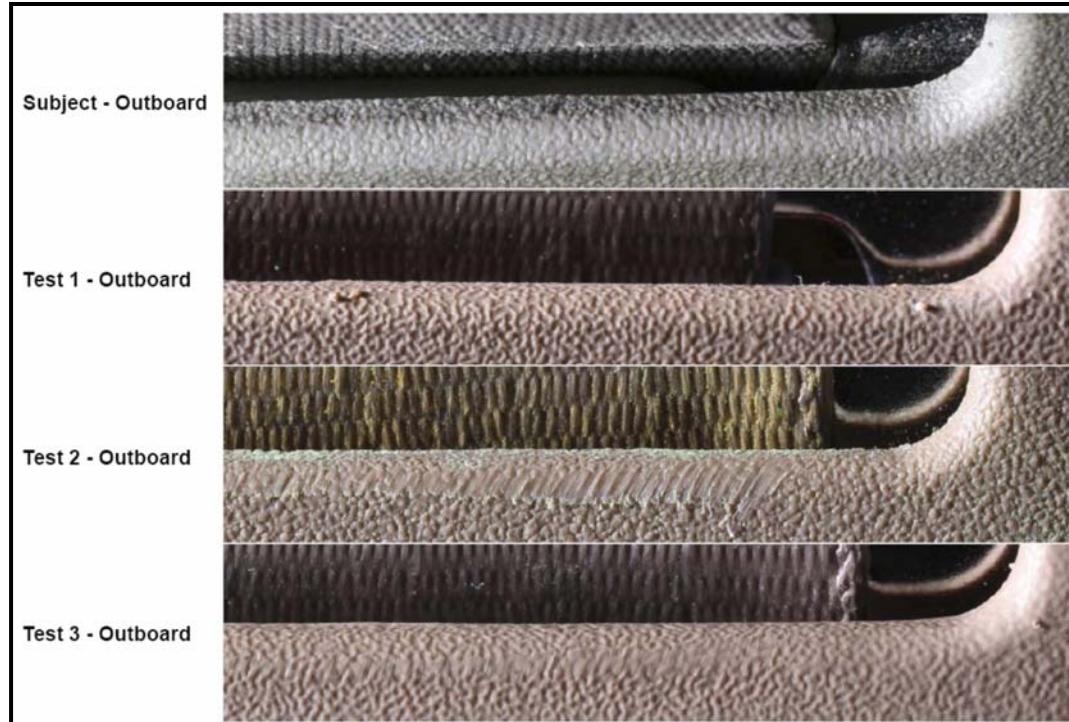


Figure 9b – Marks on H.G.H.’s latch plate and Plaintiff’s tests latch plates, outboard side – magnified⁴³

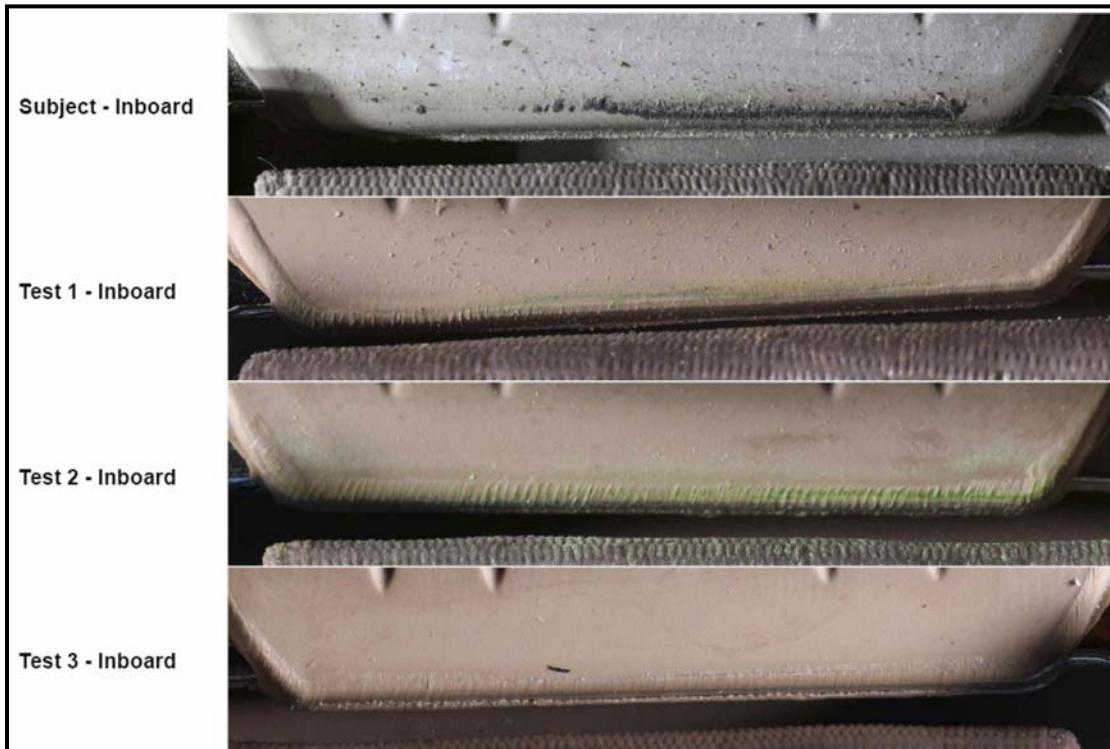


Figure 10 – Marks on H.G.H.’s latch plate and Plaintiff’s tests latch plates, inboard side⁴⁴

⁴³ *Id.* at 31.

⁴⁴ *Id.* at 32.

Lastly, there were not heavy and clearly visible load marks on the webbing of H.G.H.'s seat belt. However, there were heavy and clearly visible load marks on the webbing of the seat belts of all three of Plaintiff's tests. See the composite of photos below that shows the webbing marks made by the D-rings in Plaintiff's three sled tests. Similar marks were not observed on H.G.H.'s seat belt.⁴⁵ These tests simply confirm Dr. Van Arsdell's analysis and opinions.

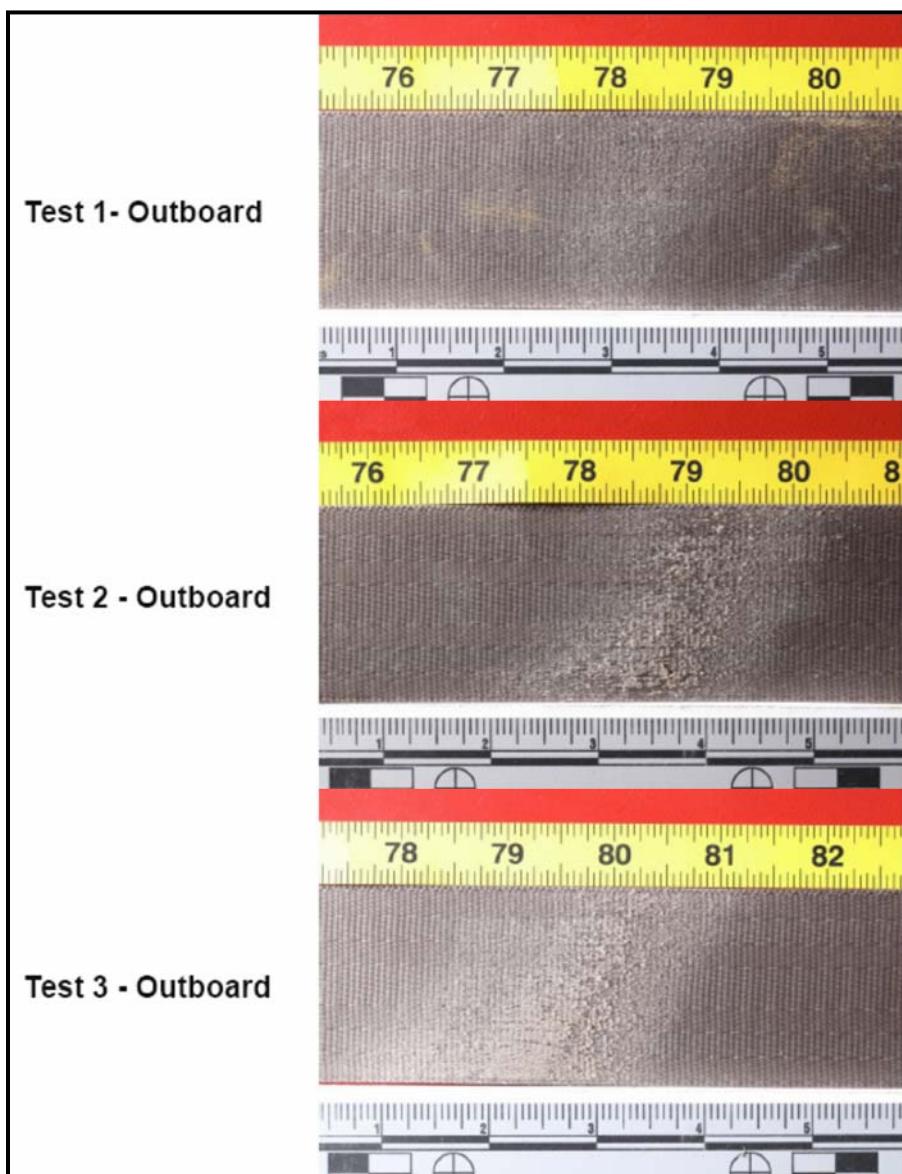


Figure 11 - Marks made on the webbing by the D-rings for Plaintiff's three sled tests⁴⁶

⁴⁵ *Id.* at 32.

⁴⁶ *Id.* at 33.

CONCLUSION

Plaintiff's motion to exclude Dr. Van Arsdell's testimony should be denied. In formulating his opinions, Dr. Van Arsdell used his specialized knowledge, experience and generally accepted and reliable, methodologies, which consists of his analysis of the physical evidence on the seat belt and front passenger seat, a review of relevant peer reviewed literature, his surrogate study, and a consultation with Dr. Courtney regarding H.G.H.'s occupant kinematics and injuries. The testing disclosed for the first time in Plaintiff's motion only confirms his analysis in this case. Dr. Van Arsdell's expert testimony will assist the jury, and he should be allowed to testify.

WHEREFORE, PREMISES CONSIDERED, Defendant FCA US requests that Plaintiff's Motion to Exclude the Testimony of Defendant's Expert William Van Arsdell be denied in its entirety, and for such other relief at law or in equity to which they may show themselves to be entitled.

Respectfully submitted,

/s/ Cary A. Slobin

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of this pleading was served on all counsel of record via the Court's E.C.F. system this 18th day of December 2018.

/s/ Cary A. Slobin